

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. A clean version of the pending claims is appended hereto for the Examiner's convenience.

1. (Currently amended) A method of immobilizing biomolecules on a surface of [[a substrate]] an array substrate comprising:

providing [[a substrate]] the array substrate having a first surface including a functional group for non-covalent attachment to a biomolecule;

contacting at least a portion of the first surface with a reducing agent;

attaching a biomolecule to the functional group.
2. (Original) The method of claim 1, wherein the reducing agent includes a hydride.
3. (Original) The method of claim 1, wherein the reducing agent includes a borohydride.
4. (Original) The method of claim 3, wherein the borohydride includes sodium borohydride.
5. (Original) The method of claim 4, wherein the sodium borohydride is in a solution at a concentration ranging from 0.01% to 1% by volume.
6. (Currently amended) [[A substrate]] An array substrate made in accordance with the method of claim 2.
7. (Currently amended) [[A substrate]] An array substrate made in accordance with the method of claim 5.
24. (New) The method of claim 1, wherein the array substrate is coated with an amino-silane.
25. (New) The method of claim 24, wherein the amino-silane includes gamma-amino-propyl-silane.
26. (New) The method of claim 3, wherein the sodium borohydride is in a solution at a concentration ranging from 0.2% to 0.3% by volume.
27. (New) The method of claim 1, wherein the reducing agent includes sodium cyanoborohydride, copper sulfate, or hydrogen.

28. (New) The method of claim 1, wherein the array substrate comprises a microarray.
29. (New) The method of claim 1, wherein the array substrate comprises an organic material.
30. (New) A method of immobilizing biomolecules on a surface of a substrate comprising:
providing a substrate having a first surface including a functional group for non-covalent attachment to a biomolecule, wherein the substrate comprises an inorganic material;
contacting at least a portion of the first surface with a reducing agent;
attaching a biomolecule to the functional group.
31. (New) The method of claim 30, wherein the inorganic material is a metal, a semiconductor material, a glass, or a ceramic material.
32. (New) The method of claim 31, wherein the glass or ceramic material is quartz, glass, porcelain, alkaline earth aluminoborosilicate glass, or a mixed oxide.
33. (New) The method of claim 30, wherein the substrate is a glass slide.
34. (New) The method of claim 30, wherein the borohydride includes sodium borohydride.
35. (New) A substrate made in accordance with the method of claim 30.